

REMARKS

Claims 1-34 are pending. Claims 11, 14, and 32-34 are amended. Claims 35-36 have been added. Applicant reserves the right to pursue the original and other claims in this and any other application.

Claims 32-34 stand objected to due to minor informalities. The claims have been amended to correct the informalities. Therefore, the objection to claims 32-34 should be withdrawn.

Claims 1-7, 14-16, 18-32, and 34 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Duesman et al. (U.S. Patent No. 6,105,152) ("Duesman"). Applicant assumes the Examiner meant to reject the claims under § 102(b) since Duesman was patented more than one year before Applicant's filing date. Additionally, the Office Action alleges claim 1 is anticipated by Duesman, then states, "Thatcher et al. discloses...." Applicant assumes the reference to Thatcher is erroneous since rejections under § 102(b) or (e) cannot be made over multiple references. In any event, the rejection is respectfully traversed.

Claim 1 recites a method of testing a memory device. The method comprises, "selecting a memory cell to be tested from a fringe region of an array of the memory device; and testing said selected memory cell using at least one test parameter that is different than a test parameter to be used for memory cells not in the fringe region."

To the contrary, Duesman discloses a method for testing a memory device comprising, applying "a first voltage ... to components in a first region of the semiconductor device (for instance, the memory portion of the microprocessor) and a second voltage ... to components in a second region of the semiconductor device

(for instance, the logic and operational circuitry of the microprocessor).” (Duesman, 7:39-45) Duesman does not distinguish between memory cells from a fringe region of a memory array and memory cells not in the fringe region. Thus, Duesman cannot disclose, teach, or suggest testing a memory cell from a fringe region “using at least one test parameter that is different than a test parameter to be used for memory cells not in the fringe region,” as recited in claim 1. Therefore, the rejection of claim 1 should be withdrawn and the claim allowed.

Claims 2-7 depend from claim 1 and are allowable over Duesman along with claim 1 for at least the reasons stated above with respect to claim 1 and on their own merits. Therefore, the rejection of claims 2-7 should be withdrawn and the claims allowed.

Claims 14, 32, and 34 recite similar limitations as claim 1 and are allowable over Duesman for at least the reasons stated above with respect to claim 1 and on their own merits. Therefore, the rejection of claims 14, 32, and 34 should be withdrawn and the claims allowed.

Claims 15-16 and 18-31 depend from claim 14 and are allowable over Duesman along with claim 14 for at least the reasons stated above with respect to claim 14 and on their own merits. Therefore, the rejection of claims 15-16 and 18-31 should be withdrawn and the claims allowed.

Claim 8-10 and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Duesman in view of McClure (U.S. Patent No. 6,006,339) (“McClure”). The rejection is respectfully traversed.

Claim 8 depends from claim 1, which, as described above, recites a method for testing a memory device, the method comprising, "selecting a memory cell to be tested from a fringe region of an array of the memory device; and testing said selected memory cell using at least one test parameter that is different than a test parameter to be used for memory cells not in the fringe region." Claim 8 adds the limitation, "wherein said at least one parameter is a first write recovery time that is different from a second write recovery time used to test memory cells not in the fringe."

The Office Action correctly notes that, "Duesman et al. fails to explicitly state where said at least one parameter is a first write recovery time that is different from a second write recovery time used to test memory cells not in the fringe." (Page 6) Thus, the Office Action relies on McClure to make out this limitation. McClure discloses determining "the speed at which data can be written to the memory ... by repeated writing to the memory cells using different time intervals for the write." However, McClure fails to disclose, teach, or suggest "a first write recovery time that is different from a second write recovery time used to test memory cells not in the fringe." Indeed, like Duesman, McClure does not distinguish between memory cells from a fringe region and memory cells not in the fringe region. McClure does not cure the failing of Duesman with respect to claim 1 or make out the additional limitation of claim 8. Therefore, the rejection of claim 8 should be withdrawn and the claim allowed.

Claims 9-10 depend from claim 8 and are allowable over the Duesman and McClure combination for at least the reasons stated above with respect to claim 8 and on their own merits. Therefore, the rejection of claims 9-10 should be withdrawn and the claims allowed.

Claim 17 recites similar limitations as claim 8 and it allowable over the Duesman and McClure combination for at least the reasons stated above with respect to claim 8 and on its own merits. Therefore, the rejection of claim 17 should be withdrawn and the claim allowed.

Claims 11-13 and 33 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Janik et al. (U.S. Patent No. 6,754,116) ("Janik") in view of McClure in further view of Duesman.

Claim 11 recites a method of testing a memory device. The method comprises, *inter alia*, "selecting a row of said memory array to be tested, said selected column and row defining a memory cell in a fringe region of said memory array; ... providing said first data to said memory cell corresponding to said selected row and selected column, where said first data is provided at a lower voltage than a voltage used to provide test data to memory cells not in the fringe region, where said first data is provided at a shorter write release time than a write release time used to provide test data to memory cells not in the fringe region...."

Even if taken in combination, Janik, McClure, and Duesman fail to disclose, teach, or suggest all limitations of the claim. As detailed above, neither McClure nor Duesman distinguish between memory cells from a fringe region of a memory array and memory cells not in the fringe region. Therefore, neither McClure nor Duesman disclose, teach, or suggest "where said first data is provided at a lower voltage than a voltage used to provide test data to memory cells not in the fringe region, where said first data is provided at a shorter write release time than a write release time used to provide test data to memory cells not in the fringe region...."

Janik discloses a memory test procedure, but also fails to distinguish between memory cells from a fringe region and memory cells not in a fringe region. To the contrary, Janik discloses a method for testing a plurality of memory banks simultaneously. (Janik, 3:16-22) Thus, Janik cannot disclose, teach, or suggest “where said first data is provided at a lower voltage than a voltage used to provide test data to memory cells not in the fringe region, where said first data is provided at a shorter write release time than a write release time used to provide test data to memory cells not in the fringe region,” as recited by claim 11. Even if taken in combination, Janik, McClure, and Duesman fail to make out at least this limitation of claim 11. Therefore, the rejection of claim 11 should be withdrawn and the claim allowed.

Claims 12-13 depend from claim 11 and are allowable over the Janik, McClure, and Duesman combination for at least the reasons stated above with respect to claim 11 and on their own merits. Therefore, the rejection of claims 12-13 should be withdrawn and the claims allowed.

Claim 33 recites similar limitations as claim 11 and is allowable over the Janik, McClure, and Duesman combination for at least the reasons stated above with respect to claim 11 and on its own merits. Therefore, the rejection of claim 33 should be withdrawn and the claim allowed.

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In view of the above amendment, applicant believes the pending application is in condition for allowance and respectfully requests that it be passed to issue.

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Respectfully submitted,

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